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Appln. No.: 10/518,570
Response to Office Action mailed April 12, 2007

REMARKS/ARGUMENTS

The Office Action of April 12, 2007 has been carefully reviewed and these remarks are responsive thereto. Claims 1, 4, 7, and 9 have been amended to correct minor informalities noted by the Examiner. No new matter has been added, and entry of the amendments to claims 1, 4, 7, and 9 is respectfully requested.

Claims 1-12 are pending in this application. Claim 1 is independent.

Applicant wishes to note that claims 1-12 of corresponding European application EP 1 516 455 have been granted Letters Patent by the European Patent Office in substantially the same form as the present claims.

Reconsideration and allowance of the application are respectfully requested.

Objection to the Title

In the Office Action, the Examiner objects to the title of the invention as not being descriptive, and requests that Applicants provide a new title.

Applicant has amended the Title to read as follows:

-- Module for Search and Integration of Data for Devices in a Home Network --.

Applicant respectfully submits that the amended Title overcomes the Examiner's objection, and entry of the amendment to the Title is respectfully requested.

Claim Rejections – 35 U.S.C. § 112

In the Office Action, the Examiner objects to claims 4 and 7 under 35 U.S.C. § 112, second paragraph, because claims 4 and 7 include the phrase "and/or."

Applicant amends claims 4 and 7 to remove that phrase and more clearly recite the features claimed therein. Applicant also noted that claim 1 and claim 9 also contained the phrase "and/or" and so has amended those claims claim as well. The amendments to claims 1, 4, 7, and

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9 are fully supported by the specification and claims, and entry of the amendments to the claims is respectfully requested.

Applicant submits that the amendment to the claims overcomes the Examiner's objection, and withdrawal of the objection to the claims is requested.

Rejections Under 35 U.S.C. § 103

In the Office Action, claims 1-12 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,505,255 Akatsu et al. (Akatsu) in view of U.S. Patent No. 5,940,387 Humpleman (Humpelman) and U.S. Patent Application Publication No. 2004/0163126 to Phillips (Phillips '126).

This rejection is respectfully traversed.

Claim 1

Akatsu et al. describes a gateway module in a home network that is connected to various devices. See Fig. 2, elements 504, 508, 512, 524, etc. The module in Akatsu can communicate with an external network and can allow other devices connected to the gateway also to communicate with the external network by formatting and routing data between the external network and the internal network. See Abstract. However, the gateway module of Akatsu simply receives data from an external network, reformats it for use by the internal network, and forwards the data to one or more devices in the internal network. See Akatsu at col. 3, lines 35-48. As the Examiner admits, Akatsu does not describe a module capable of receiving information about the external services, nor does it describe a module that has a search unit as in the claims.

Humpelman describes a home network architecture in which several home network devices communicate over an internal network with each other and in which one or more network interface units connect the home network with one or more sources in an external network. Abstract, lines 5-9; Fig. 1. However, each network interface unit in Humpelman provides access to only one source on the external network; the number of network interface

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units that is required in the network is determined by the number of streams (e.g., number of different audio, video, etc services) simultaneously required. Humpelman, col. 3, lines 32-39. Although Humpelman describes that in certain embodiments, a "master" set-top box can be provided having multiple network interface units, these network interface units are essentially the same as if each were in a separate set-top box, and merely are connected to the internal network to distribute content from the external network to devices on the internal network. Humpelman, col. 5, lines 18-23.

However, neither Akatsu nor Humpleman, either alone in or in combination describes all of the features recited in claim 1. Claim 1 recites that the module for integration in a home network "has one or more search units for searching for the availability of specific data at the providers in the external network." It is respectfully submitted that neither Akatsu nor Humpleman describes this feature of claim 1, nor would a person having ordinary skill in the art at the time the present invention was made have found this feature to be obvious from the combination of Akatsu and Humpelman.

As taught in the present specification at page 7, lines 15 to 31, the home network module can search an external network, for example, the Internet, in response to an inquiry from the home network. The searching function is performed via programs referred to as agents (software agents), which gradually evaluate the content descriptions of the providers in the external network and compare these content descriptions with the inquiry from the home network. If a match is found the corresponding data are downloaded via the connecting device.

In addition, the content providers that can be searched are not only commercial providers, which make available video or music on demand, live TV or radio programs, but also the operators of private pages on the Internet or the known search engines on the Internet. See page 4, line 33 to page 5, line 2 of the specification.

It is thus clear that the expression "searching" does not mean that the user chooses one data item from a list of data items provided by one or more providers, but that the user specifies a data item he is looking for and the search module tries to find this specific data item in the external network, e.g., the Internet.

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Nowhere does Akatsu or Humpleman, either alone or in combination, describe this aspect of claim 1. As the Examiner admits, Akatsu does not describe a search capability for making information about external services available to the home network. Humpelman does not overcome this deficiency of Akatsu. Although Humpelman describes a home network that can connect with one or more external networks, including the Internet, Humpelman does not describe a search module inside the network interface unit, in the form of a software agent or otherwise, which receives a search request from a station inside the home network or which searches multiple sources such as multiple service providers on the Internet to find the specified information.

In addition, a person having ordinary skill in the art would not have found it obvious to modify the gateway device of Akatsu, which simply receives and reformats data from and to an external network, either alone or in combination with the network interface unit of Humpelman, which simply provides an interface between an external network and an internal network, to provide a gateway device having "one or more search units for searching the availability of specific data at the providers in the external network" as recited in claim 1.

It is therefore respectfully submitted that claim 1 would not have been obvious to a person having ordinary skill in the art in view of the cited combination of Akatsu and Humpleman, and withdrawal of the rejection of claim 1 is respectfully requested.

None of the other cited references remedy the defect of Akatsu and/or Humpleman with respect to claim 1, nor are they cited for this purpose.

Although Phillips '126 describes an internet data module 109, Phillips '126 does not describe the form of search capabilities that a module offers to the home network. Therefore, there is no concrete description of a searching capability for searching specific documents by all the Internet service providers in the form of a software agent.

The other references cited by the Examiner but not applied are merely background art and do not affect the patentability of the claims herein.

For example, Bouret et al. (US 2002/0101879) describes services in the Internet from the perspective of a network operator. This reference therefore is only background art and does not

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describe any of the aspects recited in claim 1. Choi (US 2002/0147791) describes a service agent inside a home network. The service agent in Choi, however, only performs status management on matters such as whether the devices are powered on or connected to the home network, and does not search for requested information in the external network. The additional references, Lee '299 and Lee '210, relate to different other aspects of home networks but also fail to describe a dedicated search module for searching service providers in an external network for specific information requested by a home network. Finally, Applicant notes that Phillips '657 cited but not applied by the Examiner is equivalent to Phillips '126 and thus suffers the same deficiencies with respect to the present claims.

Claims 2-12

Claims 2-10, 11, and 12 depend, directly or indirectly, from claim 1. As discussed above, the cited combination of Akatsu and Humpleman does not describe all of the features recited in claim 1, and therefore, the cited combination also does not describe all of the features recited in claims 2-10 and 12, both for the reasons discussed above and in view of the additional inventive steps recited in those claims. With respect to claim 11, as discussed above, neither Phillips '126 nor any of the other cited references remedies the defects of Akatsu and Humpleman with respect to claim 1. Consequently, the combination of Akatsu and Humpleman with Phillips '126 does not describe all of the features of claim 11, in view of its dependence from claim 1 and further in view of the additional inventive steps recited therein. Therefore, it is respectfully submitted that all of dependent claims 2-12 also are allowable over the cited art, and withdrawal of the rejection is requested.

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CONCLUSION

All rejections having been addressed, Applicant respectfully submits that the present application is in condition for allowance, and respectfully solicits prompt notification of the same. However, if for any reason the Examiner believes the application is not in condition for allowance or there are any questions, the Examiner is requested to contact the undersigned at 609-734-6440.

Respectfully submitted,

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Date

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